<center>**REMARKS**</center>

Applicants respectfully request reconsideration and allowance of this application in view of the amendments above and the following comments.

The amendment filed July 28, 2008, was objected to once again under 35 USC § 132(a) as introducing new matter into the disclosure. In response, Applicants out that the Examiner has completely overlooked Applicants' response to this issue in the second paragraph on page 3 of the amendment filed April 23, 2009. If this objection is maintained in the next Office Action, then Applicants respectfully request that such Office Action not be made final inasmuch as the present Office Action clearly is incomplete, the Examiner having repeated this objection without addressing Applicants' response in the amendment of April 23, 2009.

In that amendment, Applicants directed the Examiner to the second paragraph on page 8 of the amendment filed July 28, 2008. There, Applicants explained the support for the introduced phrase "denture teeth." Specifically, Applicants stated there:

> "Applicants have amended the last paragraph on page 3 of the specification to correct translation errors, namely the replacement of 'dental prostheses' in two occurrences by -- denture teeth --. The corrections are supported by, for example, step e of original claim 1, i.e., '[s]election of 3-D data records of fabricated, previously scanned teeth from a data record D3.' 'Fabricated teeth' are the same as 'denture teeth.'"

The Examiner has not criticized Applicants' explanation, nor otherwise responded in any way. Respectfully, the Examiner is required to respond to Applicants' explanation and explain why there is no support for "denture teeth" in spite of the fact that Applicants have explained where such support can be found in the original disclosure. Applicants have explained that such support can be found, for example, in step e of original claim 1. The original claims are part of the original disclosure and, as such, material from original claims can be added to the specification without introducing new matter. *See, for example, MPEP* § 608.01(l). The Examiner has not responded to Applicants' reference to the MPEP either.

In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw this objection. An early notice that this objection has been reconsidered and withdrawn is earnestly solicited.

Claim 18 was rejected under 35 USC § 102(e) as being anticipated by Thomas, US 7,153,135. In response, Applicants remind the Examiner that anticipation requires that each and every element as set forth in the claim must be found, either expressly or inherently described, in a single prior art reference, and, further, the absence in the prior art reference of even a single one of the claim elements is sufficient to negate anticipation. *In re Robertson,* 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). In connection with the obviousness rejection on page 4 of the Office Action, the Examiner concedes that Thomas does not teach scanning fabricated teeth to produce 3D data records of fabricated teeth, selecting fabricated teeth from 3D data records, and virtually placing the teeth into the virtual model. Consequently, Thomas presumably does not

teach devices that carry out these functions. In particular, claim 18, as amended above, requires:

> (d)   a processing module that fits data for prefabricated dental prostheses into the virtual model and thereby creates a virtual model with integrated dental prosthetic teeth; and

> (e)   a simulation module that simulates mandibular movements on the virtual model and tests and optimizes positions of the integrated dental prosthetic teeth in the virtual model.

Since the Examiner concedes that Thomas does not teach virtually placing the teeth into the virtual model, Thomas cannot teach element (d) of claim 18, which performs this function. Further, since Thomas concededly does not teach the virtual model, Thomas cannot teach element (e) of claim 18, which performs functions on the virtual model. Consequently, Thomas cannot possibly anticipate claim 18—by the Examiner's own concessions.

In the Response to Arguments on page 6 of the outstanding Office Action, the Examiner says the intended use statements in previous claim 18 were not to be given any patentable weight. In response, Applicants respectfully disagree, but, in any case, have rewritten these clauses where necessary to provide meaningful functional limitations that cannot be ignored. Thus, Thomas' data set M does noThomas does not teach a processing module that fits data for prefabricated dental prostheses into the virtual model and thereby creates a virtual model with integrated dental prosthetic teeth (element (d) above); or a simulation module that simulates mandibular movements on the virtual

model and tests and optimizes positions of the integrated dental prosthetic teeth in the

virtual model (element (e) above). Consequently, again, Thomas cannot anticipate claim

18.

The Examiner also remarks that Thomas discloses a processing module at column

13, lines 15-35, that is capable of performing the function of instant element (d).

However, as previously pointed out on page 10 of the amendment filed July 28, 2008,

Thomas sets forth the aim of his invention at column 10, lines 15 ff. There, Thomas

writes enigmatically about a data merger with data depicting an outer surface:

> "This aim is reached according to the invention when at
> least a full upper or lower plastic disposable artificial
> denture is made using digital data of an image of the oral
> cavity without teeth is created and merged with data
> depicting a specific outer surface or style and a denture is
> created..."

In the following paragraph, Thomas mentions different data sets, viz:

> "an actual archived model of the person's oral cavity prior
> to complete tooth removal or artificial elements which are
> added based on personal preference as a function of image
> information."

From column 10, line 39, onward, it becomes clear that the stored archival image

must be either the *previous* denture the patient was wearing before being fitted a new

one *or* his/her *own natural teeth* when he/she still had teeth. Nowhere in Thomas, even

in the portion relied on by the Examiner, is there any teaching or suggestion that stored

images of prefabricated synthetic teeth are entered separately into the database, thereby creating data sets that can be individually moved separately.

In view of the foregoing, Applicants respectfully submit that Thomas does not anticipate claim 18. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw this rejection. An early notice that this rejection has been reconsidered and withdrawn is earnestly solicited.

Claims 19, 22, 25 and 26 were rejected under 35 USC § 103(a) as being obvious over Thomas in view of Diller, US 2002/0110786.

Claim 20 was rejected under 35 USC § 103(a) as being obvious over Thomas in view of Diller and further in view of Baumrind, US 6,621,491.

Claim 21 was rejected under 35 USC § 103(a) as being obvious over Thomas in view of Diller and further in view of Chishti, US 5,975,893.

Claims 23 and 24 were rejected under 35 USC § 103(a) as being obvious over Thomas in view of Diller and further in view of Jordan et al. ("Jordan"), US 6,152,731.

In response to *all* of the obviousness rejections, Applicants note that all of these rejections depend upon the combination of Thomas and Diller making out a *prima facie* case of the obviousness of main method claim 19, which Applicants respectfully submit the combination of Thomas and Diller fails to do. There is nothing in either Baumrind or Chishti or Jordan that remedies the deficiencies of Thomas in view of Diller. Therefore, Applicants respectfully submit that the combinations of Thomas taken in view of Diller

alone or further in view of Baumrind or Chishti or Jordan each fail to make out a *prima facie* case of the obviousness of any of the rejected claims.

Further on this point, Applicants note that the Examiner concedes that Thomas does not teach scanning fabricated teeth to produce 3D data records of fabricated teeth, selecting fabricated teeth from 3D data records, and virtually placing the teeth into the virtual model.

The Examiner looks to Diller to teach these elements "missing" from Thomas, finding it would have been obvious to modify Thomas to include the method taught by Diller in order to provide a method of manufacturing a dental prosthesis that is less error prone and easier to automate.

However, Applicants respectfully point out that Diller constructs a three-dimensional digital model of a *die* in a computer, which is certainly not a virtual model of an oral cavity, as required by instant claim 19. Thus, claim 19 requires in step (b) recording and digitizing 3-dimensional, anatomical relationships *in an oral cavity.* Then, claim 19 requires in step (e) processing the data obtained from step (b), i.e., from the oral cavity, to obtain the virtual model data record. This virtual model data record is then used in step (g) for virtual placing of the fabricated teeth into the virtual model. There is in the combination of Thomas and Diller no teaching or suggestion to make a virtual model including anatomical relationships in an oral cavity, and, thus, no teaching or suggestion to carry out, at a minimum, required steps (e) and (g) of claim 19. Absent that teaching or suggestion, the combination of Thomas and Diller cannot make out a *prima*

facie case of the obviousness of the claim 19. Further, the combinations of Thomas, Diller and Baumrind or Chishti or Jordan cannot make out a *prima facie* case of the obviousness of any of the other rejected claims.

In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw all four obviousness rejections. An early notice that all four obviousness rejections have been reconsidered and withdrawn is earnestly solicited.

Applicants believe that the foregoing constitutes a bona fide response to all outstanding objections and rejections.

Applicants also believe that this application is in condition for immediate allowance. However, should any issue(s) of a minor nature remain, the Examiner is respectfully requested to telephone the undersigned at telephone number (212) 808-0700 so that the issue(s) might be promptly resolved.

Early and favorable action is earnestly solicited.

Respectfully submitted,

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